

04DO
5-17-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Amin, Mohammad H.S.; Blais, A.; Duty, Timothy; Omelyanchouk, Alexander; Rose, Geordie; Zagoskin, Alexandre
Assignee: NOT ASSIGNED
Title: Quantum Bit With A Multi-Terminal Junction And Loop With A Phase Shift
Serial No.: 09/839,991 Filing Date: 4/20/01
Examiner: Unknown Group Art Unit: Unknown
Docket No.: M-8915-1C US

12

San Jose, California
May 16, 2001

COMMISSIONER FOR PATENTS
Washington, D. C. 20231

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR § 1.97(b)

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, § 1.97 and § 1.98, the documents listed on the accompanying PTO Form-1449 are called to the attention of the Examiner for the above patent application. Copies of these documents are not enclosed as all of these documents were previously cited by or submitted to the Patent Office in a prior application relied upon for priority under 35 U.S.C. 120 (37 C.F.R. §1.98(d)). This prior application is U.S. Serial No. 09/839,637, filed on April 20, 2001.

Citation of these documents shall not be construed as:

1. an admission that the documents are necessarily prior art with respect to the instant invention;
2. a representation that a search has been made, other than as described above; or
3. an admission that the information cited herein is, or is considered to be, material to patentability as defined in § 1.56(b).

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on 5/16/01, 2001.

Gary J. Edwards
Attorney for Applicant(s)

5/16/01
Date of Signature

Respectfully submitted,

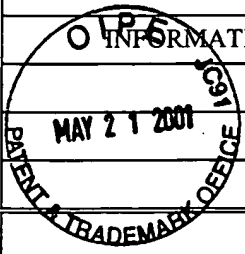
Gary J. Edwards

Gary J. Edwards
Attorney for Applicant(s)
Reg. No. 41,008

LAW OFFICES OF
SKJERVEN MORRILL
MacPHERSON LLP

25 METRO DRIVE
SUITE 700
SAN JOSE, CA 95110
(408) 453-9200
FAX (408) 453-7979

U.S. Department of Commerce, Patent and Trademark Office					Atty Docket No.		Serial No.	
					M-8915-1C US US		09/839,991	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT					Applicants			
(Use several sheets if necessary)					Mohammad H. S. Amin et al.			
					Filing Date		Group	
					April 20, 2001		Unknown	
U.S. Patent Documents								
*Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate		
AA	5,917,322	Jun. 29, 1999	Gershenfeld et al.	324	307			
Foreign Patent Documents								
							Translation	
	Document	Date	Country	Class	Subclass	Yes	No	
AB								
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
AC	Blatter, G. et al., "Design aspects of superconducting-phase quantum bits", <i>The American Physical Society</i> (2001) Vol. 63, Pages 174511-1 to 174511-9.							
AD	Briegel, H.-J. et al., "Quantum repeaters for communication" (1998), Pages 1-8.							
AE	Bruder, C. et al., "Tunnel junctions of unconventional superconductors", <i>The American Physical Society</i> (1995) Vol. 51, Pages 904-907.							
AF	Chrestin, A. et al., "Evidence for a proximity-induced energy gap in Nb/InAs/Nb junctions", <i>The American Physical Society</i> (1997) Vol. 55, Pages 8457-8465.							
AG	Dana, A. et al., "Electrostatic force spectroscopy of a single InAs quantum dot" (2001), Pages 1-5.							
AH	Feynman, R., "Simulating Physics with Computers", <i>International Journal of Theoretical Physics</i> (1982) Vol. 21, Pages 467-488.							
AI	Grover, L., "A fast quantum mechanical algorithm for database search", Pages 1-8.							
AJ	Havel, T. et al., "Principles and demonstrations of quantum information processing by NMR spectroscopy" (1999), Pages 1-42.							
AK	Jacobs, A. et al., "Proximity Effect, Andreev Reflections, and Charge Transport in Mesoscopic Superconducting-Semiconducting Heterostructures" (1998) eight pages..							
AL	Jones, J. et al., "Implementation of a quantum search algorithm on a quantum computer", <i>Nature</i> (1998) Vol. 393, Pages 344-346.							
Examiner			Date Considered					
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.								

U.S. Department of Commerce, Patent and Trademark Office						Atty Docket No.		Serial No.	
						M-8915-1C US		09/839,991	
 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)						Applicants			
						Mohammad H. S. Amin et al.			
						Filing Date		Group	
						April 20, 2001		Unknown	
U.S. Patent Documents									
*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate		
	AA								
Foreign Patent Documents									
							Translation		
		Document	Date	Country	Class	Subclass	Yes	No	
	AB								
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)									
	AC	Joyez, P. et al., "Observation of Parity-Induced Suppression of Josephson Tunneling in the Superconducting Single Electron Transistor", <i>The American Physical Society</i> (1994) Vol. 72, Pages 2458-2461.							
	AD	Kitaev, A., "Quantum measurements and the Abelian Stabilizer Problem" (1995) Pages 1-22.							
	AE	Knill, E. et al., "Resilient Quantum Computation", <i>Science</i> (1998) Vol. 279, Pages 342-345.							
	AF	Korotkov, A. et al., "Charge sensitivity of radio frequency single-electron transistor", <i>American Institute of Physics</i> (1999) Vol. 74, Pages 4052-4054.							
	AG	Lachenmann, S. et al., "Charge transport in superconductor/semiconductor/normal-conductor step junctions", <i>The American Physical Society</i> (1997) Vol. 56, Pages 108-115.							
	AH	Mooij, J. et al., "Josephson Persistent-Current Qubit", <i>Science</i> (1999) Vol. 285, Pages 1036-1039.							
	AI	Nakamura, Y. et al., "Coherent control of macroscopic quantum states in a single-Cooper-pair box", <i>Nature</i> (1999), Vol. 398, Pages 786-788.							
	AJ	Omelyanchouk, A. et al., "Ballistic Four-Terminal Josephson Junction: Bistable States and Magnetic Flux Transfer" (1999) Pages 1-11 with six pages of drawings.							
	AK	Ouboter, R. et al., "Macroscopic quantum interference effects in superconducting multiterminal microstructures", <i>Academic Press</i> (1999) Vol. 25, Pages 1005-1017.							
	AL	Ryazanov, V. et al., "Coupling of two superconductors through a ferromagnet: evidence for a η junction"(2000) Pages 1-6.							
Examiner			Date Considered						
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.									

U.S. Department of Commerce, Patent and Trademark Office					Atty Docket No.		Serial No.	
					M-8915-1C US		09/839,991	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT					Applicants			
(Use several sheets if necessary)					Mohammad H. S. Amin et al.			
					Filing Date		Group	
					April 20, 2001		Unknown	
U.S. Patent Documents								
*Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate		
AA								
Foreign Patent Documents								
							Translation	
	Document	Date	Country	Class	Subclass	Yes	No	
AB								
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
AC	Schoelkopf, R. et al., "The Radio-Frequency Single-Electron Transistor (RF-SET): A Fast and Ultrasensitive Electrometer", <i>Science</i> (1998), Vol. 280, Pages 1238-1242.							
AD	Schulz, R. et al., "Design and realization of an all d-wave dc η -superconducting quantum interference device", <i>American Institute of Physics</i> (2000), Vol. 76, Pages 912-914.							
AE	Shor, P., "Introduction to Quantum Algorithms" (2000) Pages 1-23.							
AF	Shor, P., "Polynomial-Time Algorithms For Prime Factorization And Discrete Logarithms On A Quantum Computer", Pages 1-26.							
AG	Shor, P., "Polynomial-Time Algorithms For Prime Factorization And Discrete Logarithms On A Quantum Computer", <i>Society for Industrial and Applied Mathematics</i> (1997) Vol. 26, Pages 1484-1509.							
AH	Tafuri, F. et al., "Feasibility of biepitaxial $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ Josephson junctions for fundamental studies and potential circuit implementation", <i>The American Physical Society</i> (2000) Vol. 62, Pages 431-438.							
AI	Vandersypen, L. et al., "Experimental Realization of an Order-Finding Algorithm with an NMR Quantum Computer", <i>The American Physical Society</i> (2000) Vol. 25, Pages 5452-5455.							
AJ	Vleeming, B., "The Four-terminal SQUID", Pages 1-100.							
AK	Volkov, A. et al., "Phase-coherent effects in multiterminal superconductor/normal metal mesoscopic structures" (2000), Pages 1-6.							
AL	Ye, P. et al., "High Magnetic Field Microwave Conductivity of 2D Electrons in an Array of Antidots" (2001), Pages 1-4.							
Examiner		Date Considered						
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.								